

**Utility of the Workplace Participation domain of the Youth and Young-adult Participation and
Environment Measure (Y-PEM): Stakeholder's perspectives**

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Abstract

Background: Assessing workplace participation of people with disability using measures that can inform practice is vital. **Objective:** To investigate the utility of the Youth and Young-adult Participation and Environment Measure's (Y-PEM) Workplace Participation domain. **Method:** Four focus groups were conducted with 11 stakeholders from different employment-related settings. Open-ended questions regarding Y-PEM's interpretation, meaning and relevance, drawing on elements of clinical utility, were used. Data were analyzed by two investigators using inductive thematic analysis. **Results:** Stakeholders' experience in providing/receiving employment services varied (1-16 years). Three themes emerged. *The Y-PEM captures multiple factors in employment transition;* it generates insights and sparks conversations to better appreciate and support individuals' transitioning to employment. Y-PEM meets the *need for tools to guide services of transitioning to employment* as it is comprehensive in assessing participation and the environment, can provide a "snapshot" of where the young person is at in their transition, and serves different purposes. The *tool provides a "piece of the pie"* within this complex process and could be used in conjunction with other tools. **Conclusion:** Y-PEM was perceived as essential, comprehensive, and appropriate for use in clinical and employment-related service contexts to inform practice, and guide stakeholders' decision-making in facilitating transitioning to employment.

Keywords: Workplace participation, outcome measure, transition-aged, employment-related service providers

Introduction

For individuals with disabilities, transitioning to adulthood remains a pressing issue (WHO, 2011). Successful transition to adulthood involves engaging in domains such as independent living, relationships, and employment (Janus, 2009; Newman et al., 2011). Particularly, employment -an important focus of transition services for youth with disabilities- is considered a central part of many adults' lives in terms of financial benefits, social networks, and being a contributing member of society (Newman et al., 2011). However, this critical period of "emerging adulthood" focusing on the transition from school to work, is often delayed for people with disabilities (Lindsay, McDougall, Sanford, et al., 2015). As such, youth and young adults with disabilities continue to experience lower rates of employment compared to their peers without disabilities (WHO, 2011). This highlights the need for appropriate measures to shed light on the complex process of preparing for and engaging in employment especially during the challenging transitioning to adulthood.

Participation in the workplace is an important outcome of transition services. A recent review of employment outcome measures in vocational rehabilitation of adults with neurodevelopmental disabilities reported that although common employment challenges exist across various diagnoses, a variety of services and tools were used (Di Rezze et al., 2018) with fewer studies that focused on the environment or directly addressed the impact of the environment on participation (Di Rezze et al., 2018). This raises a concern as a recent scoping review (Shahin et al., 2020) revealed that participation in work is significantly influenced by environmental factors. Examples of such factors include: availability of transportation, accessibility of the workplace, relationship with and attitudes of employers and colleagues and flexibility of work schedule among others (Shahin et al., 2020). Hence, outcome measures

should capture both the participation in work-related activities, and environmental factors that impact work functioning (Gorter et al., 2011). Such tools can guide service providers' decision-making and intervention planning to improve youth's participation outcomes in employment and can also inform youth about potential environmental factors that could impact their participation.

The Youth and young-adult Participation and Environment Measure (Y-PEM) is a unique outcome measure that evaluates both participation and environmental factors impacting participation among individuals aged 12-30 years old (Shahin, DiRezze, et al., 2022). It is modelled after the Participation and Environment Measure-Children and Youth (PEM-CY) (Coster et al., 2012), a psychometric sound parent-report assessment intended for children aged 5 to 17 that evaluates participation at home, school, the community (Coster et al., 2011). The Y-PEM, completed by the youth, includes a new domain evaluating workplace participation. This new domain contains 6 work-related participation items (see supplemental material) pertaining to job preparation (i.e., identifying interests and seeking employment), training (i.e., vocational training, education, internships, job shadowing), and engagement (i.e., performing task demands, interacting with colleagues, going to work-related social gatherings) (Shahin, DiRezze, et al., 2022). Each item is rated using three scales: *frequency* (8-point scale ranging from never to daily), *involvement* (5-point scale ranging from minimally involved to very involved) and *desire for change* (Yes/No; and the type of change desired (e.g., be more/less involved)) in the last 4 months. In this “workplace participation” domain, 16 environmental items (see supplemental material) representing barriers/supports impacting participation at work are also assessed. Examples include the physical layout of the workplace, the cognitive and social demands of the job, and availability of programs and services. These

items are scored on a 4-point scale (1= Usually makes harder/usually not available, 2= Sometimes helps, sometimes makes harder/ sometimes yes, sometimes not available, 3= Usually helps/ usually yes (available) , 4= Not an issue/not needed) where higher scores indicate higher levels of environmental facilitators (Shahin, DiRezze, et al., 2022).

The content of the Y-PEM, developed with input of young people and through expert consultation, was found relevant and clear (Shahin, et al. 2022). In addition, results of the QQ-10 questionnaire (which assesses the feasibility of the tool) among youth with and without disability (n=110) indicated that the Y-PEM was perceived as a fairly valuable measure (mean of 2.9 out of 4) that involved relatively low levels of burden (mean=3 out of 4) (Shahin, Ahmed, et al., 2022). The workplace participation section of the Y-PEM has fairly good internal consistency (0.74 to 0.82) and test-re-test reliability (0.73 to 0.74) for most of the scales (Shahin, Ahmed, et al., 2022). However, the utility of the Y-PEM in practice has not been evaluated by other stakeholders especially among service providers. The concept of measurement utility is often referred to the usefulness of a tool in practice. Clinical utility can be defined as the ease and efficiency of use of an assessment as well as the relevance (and value) of the information it provides (Smart, 2006). This study, therefore, aimed to qualitatively explore the utility of the newly developed “workplace participation” domain of the Y-PEM among stakeholders providing employment-related support and services, and those receiving services (i.e., employees with disabilities). Specifically, we aimed to better understand in what ways the information generated by this domain is relevant and meaningful in practice among different stakeholders/professionals (i.e., clinicians and community-based employment service providers). Such knowledge can set the stage for better integration of this tool in practice within two distinct sectors (health and

social services) that provide services for people with disabilities:

clinical rehabilitation centers and employment-oriented (non-clinical) organizations.

Methodology

A qualitative descriptive study design comprised of four focus groups was employed (Bradshaw et al., 2017) to elicit and describe the perspectives of stakeholders in the field of employment for individuals with disabilities regarding the utility of the Y-PEM in supporting employment of this population. A purposeful maximum variation sampling method (Patton, 2002) was used to ensure variability in stakeholder's role in supporting the targeted population (e.g., clinicians, employment consultants, managers) as well as the context in which they practice (i.e., health, social services). Sampling continued until saturation was reached (no new codes came up during the analysis).

Study procedure

Clinicians (e.g., occupational therapists, vocational specialists, orientation counselor), employment-related community-based service providers (e.g., employment counselors, directors and coordinators of employment programs) who assist youth and young adults with various disabilities in finding and sustaining employment, as well as a working young adult with disability were purposefully recruited. Stakeholder-participants from both the French and English organizations were included if they had more than one year of working experience to ensure that they are familiar with current challenges in securing employment among this population and with relevant participation-based assessment tools in their field.

They were recruited through clinical coordinators from rehabilitation centers offering transition programs, and community-based centers that provide employment services to young adults with

disabilities located in the provinces of Quebec and Ontario through recruitment ads sent to our networks.

Four separate focus groups with 11 stakeholders were conducted based on participants' preferred language; two with clinicians (n=5 in the English-speaking group; n=2 in the French-speaking group) and two with community-based service providers and service users (n=2 in English-speaking group; n=2 in French-speaking group). Having four distinct focus groups minimized potential power imbalance and allowed individuals with a common experience yet from diverse contexts and professions to share their thoughts about the Y-PEM in their respective fields (Ayrton, 2019).

All focus groups were facilitated by the same person, lasted between 1.5-2 hours and were conducted through online video conferencing in stakeholder's preferred location (i.e., home, office). First the Y-PEM questionnaire was introduced, with a special focus on the newly developed workplace participation domain illustrated through a case example. The case example exhibited the completed item-level results of workplace participation domain of Alice, a young woman aged 25 years old with spinal cord injury, who had recently finished her bachelor's degree in Computer Sciences and was looking for assistance to transition to her new employment. Stakeholders were asked to describe what the responses on the workplace participation domain of the Y-PEM meant to them and if (and how) they would use the information in their practice. A focus group guide (see supplemental material) was developed based on elements of clinical utility suggested by Smart (2006). This guide included 4 open-ended and additional prompt questions regarding the interpretation, as well as the meaning and relevance of the information obtained, which are pertinent elements of clinical utility in the field of rehabilitation (Smart, 2006). This approach enabled more comprehensive exploration of the

utility of the Y-PEM in informing practice and decision-making among stakeholders. The focus groups were video- and audio-recorded and transcribed without any identifying information. Informed consent was obtained from all stakeholder-participants.

Data analysis

The audio recordings of the focus groups were transcribed verbatim, and participants were given IDs to preserve anonymity within the transcripts. Transcripts were analyzed following Braun and Clarke's (2006) six phases of inductive thematic analysis. After familiarization with the data, each focus group conducted in English was coded manually and separately by the investigator and a second member of the research team. Both coders were rehabilitation healthcare professionals with similar levels of experience in qualitative research and a common understanding of the concept of participation. Initial 'data-driven' themes and sub-themes were identified independently by the two team members and then compared. Themes were reviewed together by both team members by first reviewing and refining the individual coded extracts within each theme and then reviewing whether the proposed thematic map accurately reflects the meanings of the overall data. The focus groups conducted in French were then coded by the investigator who was bilingual. Codes were matched to the existing thematic map. Through further discussion, themes were then defined and further refined focusing on the 'story' that each theme tells. Given the chosen descriptive methodology, the researchers attempted to stay close to the data by repeatedly going back to the original transcripts to resolve any disagreement and ensure that themes and subthemes accurately describe and summarize findings (Bradshaw et al., 2017). A third member of the research team-the principal investigator-who also acted as the peer debriefer to validate findings (Creswell & Poth, 2017) was involved at

the final stage to provide feedback on the overall narrative and clarifying what each theme entails. All three members discussed how to best name each theme and reached agreement through ongoing discussion. A summary of the main findings was then generated.

Results

Stakeholder participants

A total of 11 stakeholders (9 females, 2 males) participated in this study, among which seven were clinicians (n=5 English-speaking; n=2 French-speaking), three were community-based employment-related service providers (n=1 English-speaking; n=2 French-speaking) and one was a young adult advocate with a disability in the workforce (English-speaking) (see table 1). Stakeholder-participants had between 1-16 years of experience (median= 6.5 years) in providing employment-related services to youth and young adults older than 16 years of age with various disabilities (e.g., spinal cord injury, autism spectrum disorder, developmental disability including intellectual disability (or $IQ < 70$),) in their transitioning phase to adulthood.

Table 1

Sample description (n=11)

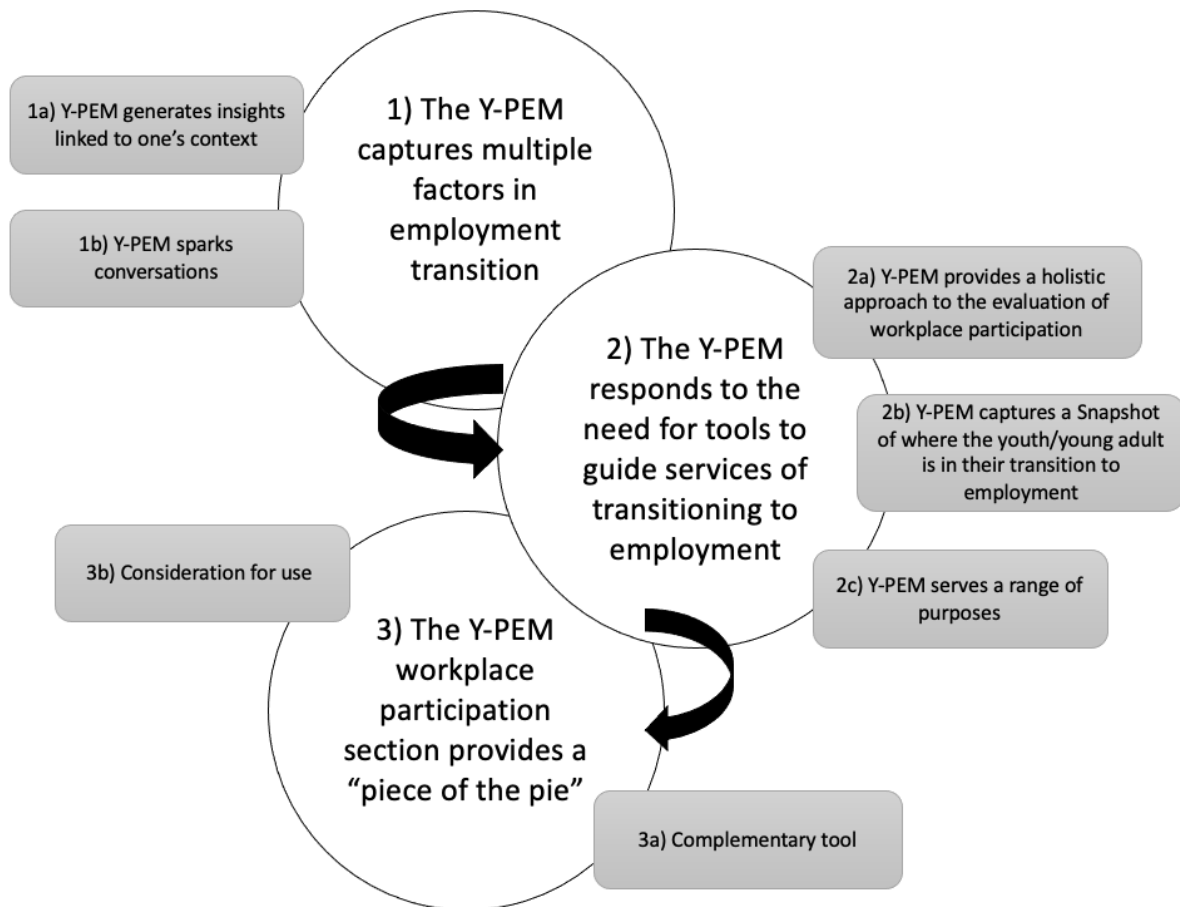
Settings	Stakeholder participants	Role
Rehabilitation/clinical settings	7 clinicians	1 occupational therapist
		2 orientation counselors
		1 vocational counselor
		1 special care counselor
		1 clinical coordinator
		1 program manager
		2 directors of employment programs
Employment-related organizations in the community (non-clinical)	3 stakeholders	1 coordinator with experience as an employment counselor
Workplace	1 working service user with lived experience	1 young adult employee/advocate

Findings

Three interrelated themes emerged from the qualitative analysis of the focus groups (see figure 1): 1) the Y-PEM captures multiple factors in employment transition, 2) the Y-PEM responds to the need for tools to guide services of transitioning to employment, and 3) the Y-PEM provides a “piece of the pie” in this complex process.

Figure 1.

This figure demonstrates the interrelated themes and the corresponding subthemes



Theme 1: The Y-PEM captures multiple factors in employment transition

All stakeholders from both the clinical and community milieu described transitioning to employment as a multi-factorial and complex process that is affected by personal, familial, environmental, and contextual factors. To illustrate, stakeholders described that information about the person's medical history, current functional capacity, education, interests, culture, living situation, past work-related experiences, and career aspirations play a role in the youth/young adult's career planning. In addition, environmental factors such as support and attitudes of family, friends, peers, employers and colleagues, work demands, availability of transportation, accommodations and accessibility were among other considerations by stakeholders. In that regard, the workplace participation domain of the Y-PEM was perceived as a multi-dimensional tool that captures the youth/ young adult perspectives about their frequency of participation, involvement, and desire to see change in the workplace as well as environmental factors that impact their participation. This tool was found to be informative and promote conversation and reflection around some of these important considerations of transitioning to employment. As such, information pertaining to this theme was categorized into two main reflective subthemes; 1a) Y-PEM generates insights linked to one's context and 1b) it sparks conversations.

Subtheme 1a) The Y-PEM generates insights linked to one's context

The combination of the scales (i.e., frequency, involvement, and desire for change) seemed to further translate into relevant information about the youth/young adult's satisfaction, motivation, values, and sense of self-efficacy from the service providers' perspectives. Specifically, the subjective scales of involvement and desire for change received particular attention from stakeholders as it shed light on the youth/ young adult's intrinsic feelings.

Although service providers recognized that the involvement scale could be an abstract concept for some and may be difficult to answer as it requires self-reflection and critical thinking, they reported that it provides insight on ones' level of engagement and motivation. One clinician mentioned that the involvement scale provides information about whether the youth/ young adult is actively involved in the process of finding and maintaining employment or that they are only contemplating being employed. This clinician further stated that the youth/young adult's level of engagement can inform the type of approach that should be taken by service providers during the intervention.

Particularly, the Y-PEM was perceived as a tool that can imply the sense of self-efficacy of the youth and young adult through the way they see themselves, their goals and the steps taken to reach their goals. Moreover, the workplace participation domain was positively received because it demonstrates if the youth/young adult is active in the work market. It further helps to explore their career aspirations by looking at what has been done in the past, the barriers they faced, and areas that have not been explored yet. Service providers also believed that the Y-PEM was practical in flagging areas in which the service user needed assistance and support. For example, a community-based service provider interpreted the young woman case study by integrating data from one item as such:

“If I look at the engaging in the process of selecting work [item #1], [...] she probably finds barriers even accessing employment because she's been doing it [engaging in the process of selecting work] a few times in the last four months, she has been very involved, and she would like to do it less often. [...] that flags for me that from [her] perspective finding employment has been difficult.” (S1)

Another stakeholder deduced the following from data generated by the Y-PEM from the case study:

“... in fact, she should perhaps increase, for example her participation in networking in her field [...] she would benefit greatly for example, by being accompanied in her job search.” (CF1)

According to stakeholders, the intake (done in their context) usually entails asking questions about the demographics of the young adult, past job experiences and future job aspirations without clear guidelines. Service providers perceived the value of this multi-dimensional tool especially for collecting data about participation in work-related activities and the environment holistically. Participants commented that this tool captures the interaction between the person and their environment. A community-based service provider saw the advantage of the Y-PEM as such:

“... [the Y-PEM] will force [service providers] a little bit more to be more structured and to think more about the interactions between the workplace environment and the person.” (S1)

Subtheme 1b) The Y-PEM Sparks conversations

The Y-PEM was perceived as a tool which sparks conversations and promotes reflection to further understand the context and factors impacting employment. Clinicians recognized that each activity set contains many elements to be explored further through discussion providing rich information. For example, participants commented that the first three items (selecting an area of work or a profession, seeking and acquiring employment, and training for a job) capture a client's underlying interests and strengths and how far they have gone in finding, acquiring, and preparing for a job. The desire for change scale further indicates service users' objectives, hopes

and aspirations in preparing for employment which can be further detailed out in a discussion to provide a deeper understanding. Furthermore, the last three items (volunteering, working in a paid job, and attending work-related events and social gatherings) pertain to engaging and performing work tasks such as attending meetings, following work schedule, and interacting with colleagues. As such, service providers explained that the responses provided could direct follow-up questions they would ask to clarify the specifics of each activity set to better understand the youth/ young adult. One community-based service provider mentioned:

“I’m already seeing how this could be a benefit for the sector where I am, you know, working right now to really understand and have more fulsome conversations about how people can be supported in the workplace.” (S1)

One service user with lived experience who holds a permanent job commented that the workplace environment domain could be used in annual reviews with their employer to have open discussions about environmental barriers that they face at work, and the accommodations that they believe could be helpful. They reported:

“From my perspective as an employee [...] this tool would be particularly helpful [...] if I wanted to make [...] a career transition [...] or say if I were doing an annual review with my employer that was coming up like to hand a sheet like this [the workplace environment section] in ahead of time so that [...] they have a bigger picture of what I’m talking about when they ask for what sort of accommodations would you like to see from us going forward.” (S2)

It was also suggested that by going over this questionnaire on an annual basis, they could evaluate if barriers have been resolved and whether new ones have risen.

Theme 2: The Y-PEM responds to the need for tools to guide services of transitioning to employment

Stakeholders mentioned the value of having a structured and comprehensive tool to help them gather pertinent information during the initial assessment. Rather than one standardized method, stakeholders reported using different ways of gathering information such as interviews, medical charts and among some clinicians, questionnaires such as the Life-H. However, no single questionnaire or tool was identified as being used consistently to systematically gather information in a structured way. In this regard, the Y-PEM was identified to be a tool that evaluates workplace participation and the environment in a structured and holistic manner. Information in this theme was categorized into three subthemes demonstrating that Y-PEM can: 2a) provide a holistic approach to the evaluation of workplace participation, 2b) capture a snapshot of where the youth/young adult is in their transitioning to employment and 3c) serve a range of purposes.

Subtheme 2a) The Y-PEM provides a holistic approach to the evaluation of workplace participation

Stakeholders commended the comprehensiveness of the Y-PEM, and its ability to holistically and chronologically capture the entire process of entering the job market and participating in work. In that regard, the first three workplace participation items were interpreted as follow: item 1 (engaging in the process of selecting an area of work or a profession) was interpreted as looking into the youth/young adult's interests, and self-reflection, item 2 (seeking and acquiring employment) captures everything youth/young adults do to get a job and item 3 (training for a job) encompasses getting a job and maintaining it. These first three items spoke to the process that one would follow to acquire employment and were identified by

stakeholders as prerequisites of maintaining employment. To illustrate, one stakeholder mentioned:

“We talked about the person's interests and and kind of self-reflection which is [item] one [engaging in the process of selecting an area of work or a profession], [item] two [seeking and acquiring employment] is kind of a how to do it and how to get there what you need to be able to do to get a job and then the [item] three [training for a job] is kind of like getting the job and kind of maintaining it so it does speak to the process that one would follow in terms of getting a job.” (C3)

Subsequently, the last three items (i.e., volunteering or working in unpaid job, working in a paid job, and attending work-related events and social gatherings) were interpreted by stakeholders as evaluating engagement in the workplace. A community-based service provider reported that this structured questionnaire guides information gathering and allows them to discuss topics that may have otherwise been forgotten. They further stated:

“With this kind of questionnaire, it looks like it's complete. Then we're going to put together a lot of information and everything.... And yes, it will serve us... ..in accompanying clients in their job search or their return to school.” (SF1)

The item pertaining to participation in social events in the workplace received notable endorsement by all stakeholders and was highlighted as being a unique and important contribution of the tool. This item was reported to provide valuable information on youth/young adult's level of comfort in social events and willingness to participate in team meetings and interact with other colleagues, which is an integral component of work participation in some jobs, often overlooked. Additionally, some service providers mentioned that this item demonstrates the social aspect of work and evaluating it exhibits its importance to youth/ young

adults with disability. This was illustrated by a community-based service provider who believes that a sense of belonging and membership at work sets the foundation to developing social network and is imperative for productivity and satisfaction:

“If you don't find yourself being fully yourself at work Uhm, you don't feel like you belong and or people don't feel like you belong and [...] that's critical for being productive [...] for having satisfaction in the workplace, just knowing that you can be you [...]” (S1)

Moreover, the section of the Y-PEM that evaluates aspects of the environment in the workplace was reported to be extensive, and to cover the range and scope of environmental barriers/supports that people with disabilities face in the workplace. Service providers deemed the environmental items appropriate and suitable for the sectors that they worked in. One service provider reported:

“At the level of the items and examples of the work environment, I find that this is quite straight forward, and it might be able to tell me, and help me, ... and these are major obstacles, as we know, for people with physical disabilities, it's if we look at the questionnaire, the, the physical layout, the noise, the environment, the sensory, the physical requirements and all that it is relevant, it is quite straight forward, and I can intervene. I would easily be able to track where I question myself.” (CF2)

To further validate their affirmation, one working young adult with lived experience reported:

“I definitely think [...] it is a definite step in the right direction, especially in regard to [...] figuring out what exactly the environment is like for a person working with a disability [...]. I liked that it included not just the physical thing because oftentimes an

employer will be like “okay” well we can accommodate you in these ways like physically [...], but that often doesn't delve into like say, like the social aspects of the job, like attending meetings or scheduling for that [...], the relationships like coworkers and supervisors, and that's what I really loved about this tool, because it gives us a section for that as well. That's definitely I feel the most important when it comes to keeping and retaining employment is maintaining those relationships and accommodating for that.”
(S2)

Subtheme 2b) Snapshot of where the youth/young adult is in their transition to employment

Stakeholders pointed out the ability of the Y-PEM to capture a snapshot of where the youth and young adult is in their transitioning to employment. The comprehensiveness of the workplace participation domain and the chronological order of the items created a picture of the client for service providers. In that regard, clinicians believed that the Y-PEM facilitated an appreciation of the youth/ young adult's “job readiness” or “closeness to the job market” by looking at how involved they are in this transition. Identifying the exact step(s) along this path where the youth/young adult is less active, can be used to target and develop interventions that specifically meets the needs of the youth/young adult. Service providers reported that the Y-PEM would be a useful tool at intake to provide a clear sense of where the youth is at, how involved they are and what they would like to change along this path. To demonstrate, one stakeholder explained:

“The tool would be like a very useful tool for that intake process as an employment service provider is trying to understand, uh, you know, a picture of the client that is coming to sit down with them and talk about their aspirations for career discovery and aspirations [...] to be connected to employment.” (S1)

Subtheme 2c) The Y-PEM serves a range of purposes

One of the advantages of the Y-PEM, expressed by stakeholders, was its ability to serve many purposes. Depending on service provider's role and sector in which they worked, they reflected on the many ways in which the Y-PEM could be used in their setting. All service providers acknowledged that the Y-PEM could be used as a goal-setting tool as it captured the youth/young adult's desire for change. They also saw its utility in identifying barriers to employment and developing targeted and client-centered intervention plans. Most agreed that the Y-PEM could be used as an educational tool for those without any work experience to create awareness about the required steps to acquire and maintain employment, as well as some of the environmental barriers that youth/ young adults with disabilities may face at work. Some service providers mentioned that they could use the Y-PEM to get a sense of the youth/ young adult's insight regarding the obstacles they may face at work based on their functional capacity. One clinician mentioned that data from the Y-PEM could indicate whether the youth/ young adult is a good fit for a specific transition program. A few stakeholders explained that the Y-PEM could be used to evaluate their client's progress and/or their own performance by re-administering the Y-PEM, or sections of the Y-PEM, after the intervention. This was particularly found to be helpful for clients whose progress were less evident. In this case, the Y-PEM could shed light on new information that could help service providers to better understand what the cause of this slow progress might be. This information could also indicate whether the targeted intervention has been helpful in removing environmental barriers, thus providing feedback to the service provider, as underlined by a community-based service provider:

“When, for example, we do [the Y-PEM] at the beginning, then the employment counselor detects certain problems and all that maybe towards the end as well there is a

way to see, [...] for example has the employment counselor met the needs of [the client].”
(SF1)

Information generated by the Y-PEM and a discussion with youth/young adults could be used to group youth/young adults with similar goals in one program. The evaluation of the social aspect of work participation and the ability of the Y-PEM to capture participation using different scales was seen as a strength of this tool in transition programs with the potential to be used as an outcome measure. A rehabilitation-based program manager reported:

“In terms of program development, we're always looking for outcome measures related to transition to adulthood for a client of youth living with disabilities and one thing that comes frequently as a potential outcome measure is social participation uhh so I really like that aspect of this questionnaire. I really like that it focuses on participation in the different variable of participation uhh and I ...if the results given by that were um uh useful, I can really see this tool [...] being used in a program like transition.” (C4)

Stakeholders also mentioned that the Y-PEM could be used to match youth/young adults with disabilities to a more appropriate job depending on their career aspirations and environmental factors that they believe might be a barrier to their participation. For example, one stakeholder commented on the item pertaining to training and its impact on deciding the appropriate type of job for their client. This community-based service provider described:

“[...] if it is a growing business and the person does not want to get training but rather wants repetitive tasks, we will perhaps not refer him to a company like that, so it's interesting to know if [the client] wants to grow... ..And is ready to put energy precisely on getting trained.” (SF2)

Lastly, it was noted that information generated from the Y-PEM from specific populations could be used to advocate for better services and policies at a broader societal level. A community-based service provider reported that the Y-PEM not only allows comprehensive re-evaluation of their client's contexts and challenges that might have been overlooked during the initial assessment, it also allows them to gather information about similar challenges that their clientele experiences. They further stated:

“ [...] it is certain that we can make reports and then take it to the regional, provincial level, [...] we push to uh to integrate people with disability who do not have adequate [...] services. [The Y-PEM] can lead to [...] different information that could be used.”
(SF2)

Theme 3: Y-PEM's workplace participation domain provides a “piece of the pie”

Service providers emphasized that transitioning to employment is a complex process that is impacted by various contextual factors. Although the tool was perceived as comprehensive, some stakeholders conceded that the Y-PEM provides “a piece of the pie” in their evaluation of the youth/young adult and could be used in conjunction with other tools. Stakeholders also provided suggestions for its use in practice. Information pertaining to this theme is categorized into the following subthemes: 3a) complementary tool and 3b) considerations for use.

Subtheme 3a) Complementary tool

All stakeholders noted that although the Y-PEM provides a snapshot of the youth/young adult's work-related involvement in the last four months, it should be used in conjunction with a discussion or other tools depending on the context/services. One community-based stakeholder identified that the Y-PEM would be another tool for employment-service providers who support

people with disabilities to add to their toolkit. Discussion to further detail out important aspects of each item with follow-up questions was noted to be beneficial in certain cases. For example, item 5 of the workplace participation domain (working in a paid job) entails examples of activities (i.e., performing job related tasks, attending work-related meetings, monitoring one's own performance, etc.) that might each be worth exploring with the youth/ young adult in detail especially, if they would like to see a change in this type of activity. Similarly, a discussion about each item can provide in-depth information that could help service providers to better understand the first-hand experience of youth and young adults in this transitioning process. Information from the Y-PEM can be complemented through the use of other tools depending on the setting. Service providers suggested that other tools or additional questions such as the type of work (full-time vs part-time) that the service user is looking for and previous accommodations that have facilitated work participation could also be valuable in informing their practice and service provision. The use of other outcome measures and tools might be beneficial in accurately assessing client's physical and cognitive abilities. One clinician portrays this as follows:

"I find that [item] 5 [working in a paid job] in bold is much too large while there are other elements detailed in the examples which I find as important skills for me as a rehabilitation specialist to identify, measure, then to further explore with a measurement tool." (CF2)

Subtheme 3b) Consideration for use

Service providers described having clients with multiple types of diagnosis and a wide range of functional and cognitive abilities. The Y-PEM could be complex and difficult to complete as a self-reported measure by youth and young adults with cognitive impairment. Service providers reported that adapting the tools they use to the youth/ young adult's level of

comprehension is part of their typical practice. The Y-PEM was perceived as a tool that could be adapted by the service provider to be appropriate for their client. Stakeholders suggested that the Y-PEM be administered by the service provider using lay language in certain cases to ensure that youth/young adults understand the items and adequately respond to them. This was explained by a stakeholder as such:

“The highly cognitive functioning people I can just give the test or the questions and they’ll do it. We do a lot of adapting whatever we do because [...] everybody is so individually different, and their needs are so different that we uh we do have to adapt whatever we do.” (C2)

Service providers also noted the flexibility with which the Y-PEM could be used depending on their needs. For example, some service providers reported that it is more appropriate to only administer the workplace environment domain to gain information on specific environmental barriers and supports that their client is experiencing at work. Other service providers mentioned that they would only administer the workplace participation domain if their client is still in the first steps of acquiring a job and is not deemed “close to the job market” or ready for employment. Some saw the benefit of administering the entire workplace participation setting, including the environment domain to service users who are “close to the job market” but have no previous work experience as a way to raise awareness about the impact of the environment on work participation. Others reported that they would re-administer the Y-PEM as an outcome measure to assess the youth/ young adult’s progress or the effectiveness of their intervention. Some reported that they may only re-administer parts of the Y-PEM that they deem relevant, while others mentioned that they do not see the advantage of re-administering the Y-PEM at all.

Discussion

This qualitative study provides initial insights on the potential utility of the newly developed workplace participation domain of the Y-PEM among various groups of stakeholders including clinicians, transition counselors, employment-related service providers, and a service user with disability. Having a diverse sample of participants in the focus groups allowed us to gather stakeholder's opinions about the Y-PEM and its potential role in informing decision-making in a range of contexts and purposes. Results of the focus groups illustrated that the Y-PEM is unique in being a comprehensive tool that evaluate both workplace participation and features of the work environment. This tool could be used by various professionals across different settings and sectors, health and social. In that sense the Y-PEM begins to address one of the gaps (i.e., lack of measures that can be used across different settings/sectors) of existing employment outcome measures currently used in practice, identified in a recent scoping review (Di Rezze, 2018). Further investigation across a broader sample including stakeholders of the educational sector can complement these findings.

The Y-PEM was perceived as a tool that responds to the need to guide employment transition services that can be used in many contexts such as a clinical rehabilitation setting, community organizations, and within the workplace. Thereby, it may serve as a form to facilitate communication (and potential collaborations) between professionals from different sectors working towards a shared goal – improving transitioning to employment among people with disability (Magee & Plotner, 2021). As such, youth- from an early age- can be evaluated and supported continuously in their journey to acquiring employment by their rehabilitation specialist, followed by the employment counselor in the community and then the employer at the workplace. This may further facilitate the provision of service delivery on a continuum basis,

promoting a life course approach to transition to adulthood (Landmark et al., 2022; McCormick et al., 2021; Palisano et al., 2017). Furthermore, stakeholders in our study indicated that the Y-PEM can be used with employers of people with disability during annual meetings to facilitate communication about workplace barriers that employees with disability face. They stressed that it can promote open discussion about the accommodations that people with disability require to perform their jobs. As such, this tool can help increase employers' awareness concerning their employees' needs. It may also serve as a tool for those with disabilities to advocate for adequate accommodations at work and may enhance effective communication with employers. These were previously found to be important facilitators for successful participation in the workplace (Lindsay et al., 2018; Lindsay et al., 2021; Lu et al., 2021).

The Y-PEM was also found to serve many purposes. Stakeholders working with youth/young adults with disabilities in transition and employment programs revealed the use of this tool to set goals, guide individualized intervention planning, and determine youth/ young adults' job readiness. Such information can guide customized care, allocating appropriate resources and services based on identified needs. This aligns with evidence supporting the use of a client-centered approach with individualized interventions to remove barriers and build on supports to ease employment acquisition and transition to adulthood (Leahy et al., 2014). Furthermore, another purpose served by the Y-PEM emerged by stakeholders is worth reflection on. The Y-PEM was perceived as appropriate for use with people with and without work experience as an educational tool to increase awareness about the steps involved in acquiring employment as well as environmental obstacles/ facilitators that could impact their future work participation. These findings coincide with a systematic review recommending that stakeholders support youth and young adults with disabilities to become more aware of their condition and

build self-advocacy skills to facilitate maintaining employment (Lindsay et al., 2018). Thus, the versatility of the Y-PEM allows for its use in different ways depending on the discretion and reasoning of the service providers to be implemented in a way that aligns with their context/service and addresses the needs of their clients.

As illustrated by the theme “Y-PEM responds to the need for tools to guide services of transitioning,” stakeholders saw the benefits of the Y-PEM in additional aspects of their practice. Specifically, they acknowledge it could direct and impact service provision and decision making in various levels. At the client level, in addition to goal setting and intervention planning, Y-PEM can guide matching clients to appropriate jobs that fit within their functional ability, interests, and career aspirations. At an organizational level, depending on the needs and values of institutes, our findings suggest the Y-PEM may be used to identify the needs and evaluate the youth/ young adults in their transitioning to employment and possibly assess the effectiveness of the intervention and/ or program. As such, this implied function of the Y-PEM can potentially address the need for tools to evaluate the effectiveness of employment services (Agans et al., 2020; Hamilton, 2015; Stewart et al., 2006), yet future studies are needed to confirm this assumption. In a broader societal context, the Y-PEM was seen as a valuable data collection tool to advocate for better services and policies in facilitating transition to employment – a critical barrier to participation identified in a recent scoping review (Shahin et al., 2020). Addressing barriers at the individual, sociostructural and environmental levels is in line with current approaches for promoting better employment outcomes among youth and young adults with disabilities (Lindsay, McDougall, Menna-Dack, et al., 2015).

Service providers not only valued the ability of the Y-PEM to collect extensive data in a relatively short amount of time, they also saw its use beyond just gathering information about the

frequency, involvement, desire for change, and the environment. Service providers interpreted the data holistically by looking at all three scales (i.e., frequency, involvement, desire for change) which generated new thoughts and links about their client's participation. These were youth/ young adult's motivation, satisfaction, sense of self-efficacy, job readiness, ability to do abstract and critical thinking, and awareness of how the environment could play a role in either facilitating or hindering their workplace participation given their functional capacity. These employment outcomes are in line with outcomes that are commonly evaluated in vocational rehabilitation among people with neurodevelopmental disability (Di Rezze et al., 2018).

All stakeholders commented on the comprehensiveness and pertinence of the workplace activity sets and environmental items, further adding to the content validity of this domain (Shahin, DiRezze, et al., 2022). Specifically, the social aspect of work (i.e., engagement in work-related social gathering and meetings, relationships and interaction with colleagues, supervisors, employers as well as customers) received particular attention by stakeholders as an important aspect of employment, often overlooked. In fact, a recent scoping review revealed that support and relationships from colleagues and employers were among one of the main environmental facilitators to maintaining employment among young adults with disabilities (Shahin et al., 2020). Hence, identifying and addressing social barriers (not merely physical barriers) at the workplace to better integrate and socially include this population can increase sense of belonging and satisfaction which could further facilitate work engagement as identified in previous research (Barf et al., 2009; de Beer et al., 2014).

In our study, the Y-PEM was perceived by stakeholders as a tool that provides an important “piece of the pie” within this complex process, especially when used in conjunction with other methods. Specifically, stakeholders commented on the ability of the Y-PEM to guide

the interview process by sparking conversations, generating follow-up questions, and promoting reflection around the multi-factorial components of work participation to better understand youth/ young adult's context. This finding coincides with the idea that a range of methods (including qualitative interviews) may be required to fully account for this complex concept of participation at work, as discussed elsewhere (Di Rezze et al., 2018).

Limitations and future directions

Although stakeholders had varying roles and experiences, most of them were located in Quebec. Since employment-related service provision and policies may vary in different provinces, caution should be exercised in generalizing the data to other Canadian provinces and beyond. The study also included a relatively small sample size (and a small group size for some groups) considering methods used which may affect the transferability of the results. However, we tried to address this by including stakeholders from different organizations, contexts, and professional backgrounds through purposive recruitment. This study explored the utility of one (newly developed) domain of the Y-PEM that focuses on employment/participation in work. Further studies can examine the utility of the Y-PEM in its entirety (across the other 3 settings; home, school/educational and community settings) to get a deeper understanding of its utility within the transition to adulthood. Seeking feedback from service providers who are actively using the Y-PEM in their day-to-day practice is also warranted. The findings provide initial support for the potential uptake of the Y-PEM in different settings of service delivery. Future implementation studies are needed to ensure the use of the Y-PEM in a sustainable way across different settings; both clinical (rehabilitation centers) and non-clinical (community-based employment-related organizations, the workplace) contexts.

Conclusion

Findings suggest the workplace participation domain of the Y-PEM is a structured and comprehensive tool that appears to be appropriate and relevant for use in various contexts and for different purposes by employment-related service providers and service users to capture workplace participation and the environment. As such, it may serve as an additional tool within stakeholders' toolkit that could guide service provision to support youth and young adults with disabilities in the complex transitioning to employment.

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Conflict of interest

The authors have no conflict of interest to report.

Ethics

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Informed consent

Informed consent has been obtained from all stakeholder-participants.

Supplementary Material

Supplemental material contains the workplace participation domain of the Y-PEM including 6 items pertaining to workplace participation and 16 environmental items. Guiding questions used in the focus group are also supplied.

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